A.4.5 Sample Return Laboratory Instrument and Data Analysis

Note: This is a preliminary description for this program element of this NRA. A final version will be posted as an Amendment to this solicitation no later that 90 days prior to the due date for proposals whenever that data is established. Comments or suggestions on this current version are welcome until April 15, 2001, and may be directed to the Discipline Scientist named below in Section 3.

1. Scope of Program

The ultimate goals of the Sample Return Laboratory Instrument and Data Analysis program (SRLIDAP) will be to maximize the scientific return from the samples provided by the Discovery missions, Genesis, and STARDUST, through development of laboratory instrumentation and advanced analytical techniques required for the full analyses of the samples they returned.

Proposals solicited under this program are expected to include those that seek to develop new analytical instrumentation or combinations of analytical instruments or where significant improvements in the precision, resolution, or sensitivity of measurements will be made possible compared to the existing state-of-the-art. Also of interest is the development of new analytical techniques for existing instrumentation that will push the limits of current technology by elimination of analytical interferences or contamination problems. In some instances, it will make sense to develop instrumentation and techniques that will be used by only a small number of investigators at a single institution. In other instances, the high cost of the instrument and its associated support structure may allow the development of only a limited number of such facilities that must be shared by the entire community. Therefore, cost sharing arrangements in the development of new instrumentation or techniques and evidence of a long-term institutional commitment to the analysis of returned samples will be viewed favorably in the selection process.

2. Background

Genesis is a mission designed to return samples of the solar wind to provide tight constraints the chemical and isotopic composition of the primitive solar nebula. Genesis is scheduled for launch in the summer of 2001 will return of samples to Earth in 2004**.** STARDUST, a mission to return samples of a cometary coma, was successfully launched in 1999 and is scheduled to return its samples to Earth in 2006. It is anticipated that additional missions undertaken within the Discovery-class Mission envelope will also return samples posing unique analytical challenges.

3. Programmatic Information

Total funding for the SRLIDAP is anticipated to be about $4M for its first year for 10-15 selection and is expected to grow to $6.5 M for the next 2-3 years.

IMPORTANT INFORMATION

As discussed in the *Summary of Solicitation* of this NRA, the Office of Space Science (OSS) is now using a single, unified set of instructions for the submission of proposals. This material is contained in the document entitled *OSS Guidebook for Proposers Responding to NASA Research Announcement – 2001* (or "*OSS Guidebook – 2001*" for short) that is accessible by opening "Research Opportunities and Data" from the menu at URL http://spacescience.nasa.gov , or directly at URL http://spacescience.nasa.gov/research/ossguidebook/ . This NRA's *Summary of Solicitation* also contains the schedule and instructions for the electronic submission of a Notice of Intent (NOI) to propose and a proposal's *Cover Page/Proposal Summary*, for electronic access to the required *Budget Summary* form, and the mailing address for the submission of a proposal.

For further information, contact the Discipline Scientist for this program element:

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